

A NEW GREVILLEA SPECIES FROM WESTERN VICTORIA

by

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Grevillea microstegia. W. M. Molyneux spec. nov.

Frutex usque ad 60 cm altus, sed 200–400 cm latus, densus interdum vagans; caulis principalis breviter ascendens, mox paene prostratus; rami prope prostrati, saepe implicati vel eorum extremitates oblique arcuatae; folia bipinnatipartita, in lobos numerosos angustos spinosos divisa, in superficiebus mature glabra sed subter pilos paucos breves dispersos gerentia: racemi secundi, varie deflexi vel penduli, pendunculis tenuibus pubescentibus praediti; perianthium parvum (ca. 10 mm longum); bracteae florales minutae (ca. 0·25 mm longae), aut praemature deciduae aut interdum persistentes; stipes ex toro obliquo paene centraliter emergens; fructus oblique ellipsoideus, stylo persistenti.

HOLOTYPE: Victoria, Mount Cassel, central eastern ranges of the Grampians Mountains, 14·5 kilometres west-north-west of Moyston, W. M. Molyneux, M. Tonkin and R. Tonkin, 27.ix.1970 (MEL 501440).

ISOTYPES: at MEL, NSW, CANB, K.

ALSO EXAMINED: Mount Cassel, lower and higher ridges and slopes, W. M. Molyneux and R. V. Smith, 17.xi.1970; Mount Cassel, W. M. Molyneux, ii.1972, 12.xii.1972, 2.xii.1973.

A dense or sometimes straggling *shrub* to 0·6 m high, 2–4 m wide; *main stem* shortly ascending, soon becoming almost prostrate; *branches* intertwined, building up densely upon each other, ends often curving sideways in an arc, or ascending, glabrous or scarcely hairy (except when young). *Leaves* bipinnatipartite, petiolate, narrowly cuneate up to the \pm deltoid laminae, 30–40 m long, 20–40 m wide, divided into 5–11 prickly lobes each 1–2 mm wide and 4–5 mm apart, either entire or again divided into mostly 2–3 short secondary lobes, rarely lobed again; margins revolute; upper surfaces glabrous, dark green, mid vein inconspicuous; under surfaces light green, glabrous, or with few scattered hairs; primary veins prominent, secondary veins obscure; new leaves pink, pubescent on both surfaces. †*Inflorescences* arising from lateral branchlets, subterminal, or occasionally terminal, on pubescent *peduncles*, 13–20 mm long; rachis 20–30 mm long, densely pubescent; *racemes* ca. 30-flowered, secund, variously deflexed or pendulous, 20–30 mm long, ca. 19 mm wide at anthesis; *Floral bracts* inconspicuous, 0·25 mm long, 0·5–1 mm wide, variously concave, broadly

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† All observations were made from fresh material.

deltoid to \pm rhomboidal when flattened, with spreading hairs on the back; deciduous before anthesis, or occasionally persistent; *pedicels* ca. 1.0 mm long *torus* oblique. *Perianth* red ca. 10 mm long, narrow, clothed in spreading or appressed silky hairs outside; glabrous inside, varying in colour from brown to yellow; *gland* three-quarters annular, 0.25–0.50 mm wide; *ovary* covered in long, silky, spreading hairs; *stipe* ca. 1.5 mm long inserted \pm centrally on torus; *style* red, 7–12 mm long, narrow, glabrous to the base where densely silky; *pollen presenter* very oblique, ca. 1.0 mm broad, terminating in a centrally located stigma. *Fruits* obliquely ellipsoidal, ca. 10 mm long, ca. 7 mm wide and deep, densely hairy, greenish-grey when fresh, drying grey, with irregular longitudinal purple markings; *style* persistent, withered, on old seed capsules.

FLOWERING: September to December.

DISTRIBUTION: Confined to the ridge tops and higher slopes of the southerly ridges of Mount Cassel, at elevations between ca. 600 and 650 m, where occurrences are sporadic over ca. 3.0 kilometres. Plants were seldom observed more than 30 m below the ridges on eastern or western slopes. Associated with stringy-bark forests with dense understorey, which includes species of *Epacris*, *Acacia*, *Astroloma*, *Phebalium*, on lower ridges and on margins of moist sandstone shelves in association with *Micromyrtus ciliata* and *Leptospermum nitidum* at higher elevations.

DISCUSSION

Judging from seedling growth in its native habit, this species reproduces sexually rather than vegetatively. It would then bear further investigation to determine why it has such a limited distribution. One reason for this limitation may be the susceptibility of established plants to drought conditions. During the dry summer of 1972-73, a large number of plants of advanced age died, and this was followed the next season with substantial seedling regeneration.

Under cultivation, the growth habit of *G. microstegia* is still very dense, but forms a more upright shrub, although still retaining the characteristic of the branches to sweep sideways, up to 90°, sometimes quite sharply or in a gradual arc.

G. microstegia has its closest affinity to a known taxa in *G. dryophylla* N. A. Wakefield, which differs in having leaves with broader, more rounded segments, which are pubescent on the upper surface, under surface variously clothed in ferruginous or grey hairs, peduncles shorter and stouter, racemes bearing up to 50 flowers, a more oblique torus, shorter hairs on the ovary which is born on a stipe sited more consistently towards the top of the torus, length and thickness of style are similar, but



HOLO-
TYPE

MEL501440

ROYAL BOTANIC GARDENS
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VICTORIA, AUSTRALIA

GREVILLEA MICROSTEGIA W.F. Molyneux

Loc. VICTORIA: Mt. Garrel, central
eastern ranges of the Trampians
Mountains, 12.5 kilometres
west-north-west of Moynton,

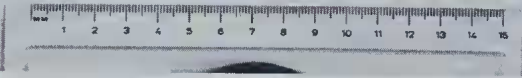
Notes. Confined to the ridge tops
and higher slopes at elevations
between 600 & 650 m.

Flowering: September to December

Coll. W.F. Molyneux, M. Tonkin and
R. Tonkin, 27.ix.1970

Det. W.F. Molyneux.

ROYAL BOTANIC GARDENS
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Holotype specimen of *Grevillea microstegia*.

the stigma is raised and more prominent, floral bracts small but narrower and more acute.

The nearest affinity to the new species would appear to be an as yet unnamed *Grevillea* occurring in dry sclerophyll forests on Mount Ben Major and surrounding areas, ± 22 kilometres north of Beaufort in western Victoria; although there are features which link the two, table 1 illustrates the major features which were consistently different in specimens of both populations examined.

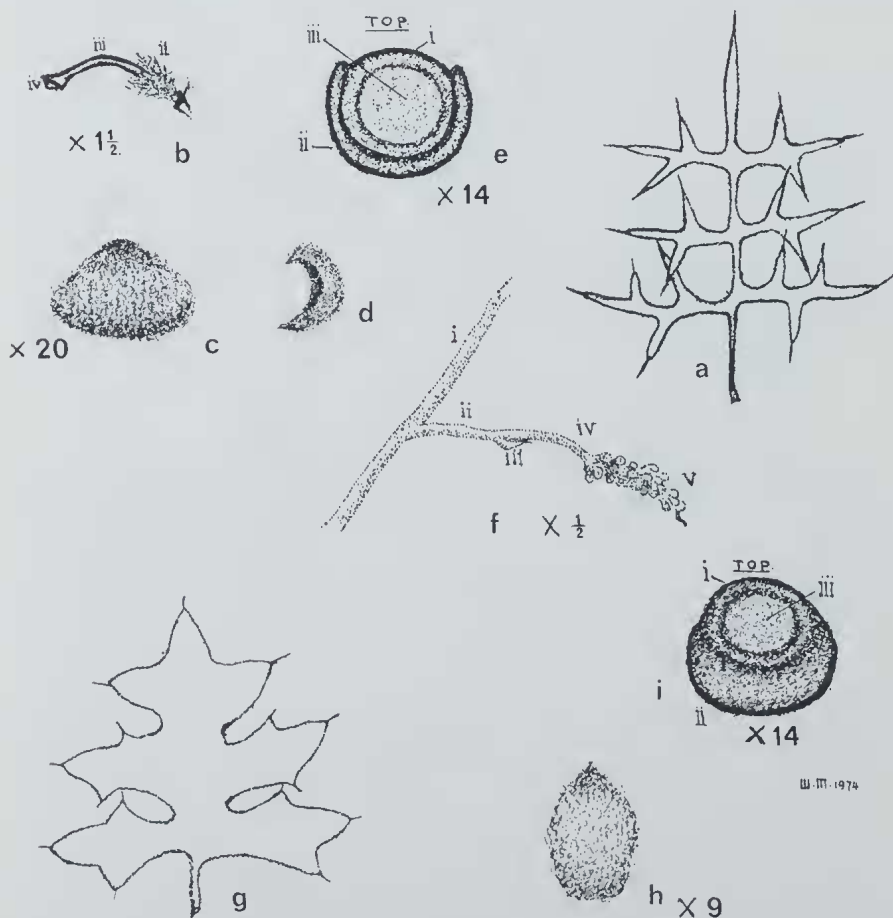


Fig. 1—Comparison of *Grevillea microstegia* and the undescribed *Grevillea* species from Ben Major region. a-f. *G. microstegia*: a. leaf; b. pistil, i. torus, ii. densely hairy stipitate ovary, iii. style, iv. pollen presenter; c. dorsal view of floral bract; d. lateral view of floral bract; e. torus from above with stipe of ovary removed, i. torus, ii. gland, iii. base of ovary stipe illustrating central location on torus; f. i. stem, ii. lateral branch, iii. incipient leaf, iv. peduncle, v. raceme of immature flowers. g-i. *Grevillea* sp.: g. leaf; h. dorsal view of floral bract; i. torus from above with stipe of ovary removed, i. torus, ii. gland, iii. base of ovary stipe illustrating location towards top of torus.

Of interest is the situation of the colonies in relation to each other; separated geographically in an east-west line by 68 kilometres, they grow on different soil types; *G. microstegia* on sandstone, or in humus soil composed of decomposed sandstone and loose sandstone scree, with the greater number of plants growing either on top of flat ridges or on easterly slopes; the undescribed *Grevillea* from the Ben Major area grows on auriferous soils usually associated with dry sclerophyll forests; most plants examined were growing on westerly slopes or just on or below the ridges. The seedling leaves of *G. microstegia* are much larger than mature foliage, being longer and broader; the lobes usually average 11 with some leaves having 13 primary lobes which are hairy, broader than the mature foliage, and with many more secondary lobes. The undescribed *Grevillea* has similar seedling leaves to the adult, but primary lobes are more often 7-9.

In applying the specific epithet, I considered the small floral bracts to be one of the major distinguishing features.

<i>Grevillea microstegia</i>	<i>Grevillea</i> sp.
1. Transverse Section of young stems \pm Pentagonal in shape with irregular longitudinal striations.	Transverse Section of young stems terete without striations.
2. Leaves mostly longer than wide; lobes ca. 5-11, 1.0-2.0 mm wide, ca. 4-5 mm apart and usually less than 3 cm apart on branches.	Leaves quite often as wide as they are long; lobes ca. 5-7 and ca. 5-10 mm wide, usually more than 3 cm apart and up to ca. 4-5 cm apart on branches.
3. Peduncles ca. 13-20 mm long; pubescent.	Peduncles ca. 13-23 mm long, almost glabrous; threadlike.
4. Floral bracts small, ca. 0.5 mm long; deltoid, \pm rhomboidal.	Floral bracts ca. 2 mm long; ovate, elliptical.
5. Gland three-quarters annular; ca. 0.25-0.50 mm wide.	Gland half to three-quarters annular, ca. 0.5 mm wide.
6. Ovary densely covered in long, spreading hairs on a stipe ca. 1.5 mm long, inserted \pm centrally on torus.	Ovary pubescent on a stipe ca. 1.0 mm long, inserted towards the top of the torus.
7. Style 7-12 mm long.	Style 7-9 mm long.

Table 1.—Comparison of *Grevillea microstegia* and the undescribed *Grevillea* sp. from the Ben Major area, from observations made on living plants in the field and under cultivation and on own Herbarium material.

ACKNOWLEDGMENTS

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